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## Interest of diffusion-weighted magnetic resonance imaging in IgG4 related renal disease detection and follow-up

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**Introduction:** Tubulointerstitial Nephritis (TIN) is a manifestation of IgG4-related diseases, which are characterized by infiltration of target organs by IgG4+ plasma cells and severe fibrosis. Cortico-sensitivity is one of the diagnostic criteria, but the treatment of steroid resistant and dependent forms is not well defined.

Case Report: We present a case of a 47-years-old patient with IgG4-related NTI followed for 72 months. He complained of fatigue and recurrent postprandial abdominal pain. With the exception of elevated levels of Gamma-Glutamyl Transferase (GGT), transaminases and IgG4, kidney function remained normal (serum creatinine  $\leq$  0.9 mg/dL). After 2 cures of methyl prednisolone (2010-11) azathioprine was associated in 2012. Due to the corticodependence and persistence of bilateral focal renal lesions detected by diffusion-weighted magnetic resonance imaging (DW-MRI), Rituximab (RTX) was given (2  $\times$  376 mg/m²/15 days) in 2013. Before the first injection, Positron Emission Tomography (PET) showed metabolic hyperactivity corresponding to axillary and abdominal aorta lymph nodes but not in the kidney. After 4 months of RTX, the patient became asymptomatic. All biological alterations disappeared. PET showed a decrease in metabolic activity at extrarenal lesions described above. A dramatic regression of bilateral renal lesions was noted by DW-MRI: the apparent diffusion coefficient had almost doubled (0.776 vs. 1.111x10<sup>-3</sup> mm²/sec) and the volume of renal lesions was reduced by 50%, which was never observed under other treatments.

**Results:** Our observations demonstrate: (1) the clinical, biological and radiological efficacy of rituximab in a steroid-dependent form of IgG4- related TIN and (2) the interest of DW-MRI as a non-nephrotoxic radiological and PET complementary approach not only in monitoring the effectiveness of immunosuppression but also in the early detection of renal involvement during IgG4 related disease.

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## Successful completion of pregnancy using apheresis and a balanced dose of coagulation factors in the presence of high thrombophilia and Lp(a) levels in a woman with two previous abortions

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**Importance:** The case shows clinical impact of thrombophilia and Lp(a) increases in relation to unwanted abortions and a possibility of intervention to allow a successful pregnancy for affected patients.

**Observations:** This is a single case of a 26-year-old woman with two apoplectic insults at young age with different coagulation disorders (type 1 von Willebrand disease, protein S deficiency and increased levels of lipoprotein a) and also strong positive family history. Due to high active thrombophilia status and with respect to very thin coronary arteries a weekly lipoprotein apheresis treatment (LA) was initiated. Before LA was initiated the patient was getting pregnant twice and once under a weekly LA, but lost fetus each time. Under an intensified to treatment intervals twice a week she got again pregnant again. Pregnancy developed regular, without any complications. Baby was delivered in 34<sup>th</sup> week of pregnancy by caesarean section, developed well and could left the incubator from the 14<sup>th</sup> day after delivery.

**Conclusions & Relevance:** Under an intensive treatment regimen it was possible to allow a successful pregnancy for high thrombophilia and Lp(a) increased patient. This case shows the importance of an interdisciplinary and individual patient-centered approach in pregnancy management for affected women.

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